# PATENT COOPERATION TREA

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PATENT COOPERATION TREA PCT	REC'D	1 3 JUL 1999
INTERNATIONAL PRELIMINARY EXAMINATION RI	WIR	PCT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference DAV02529.O1I/CTG:mlh	FOR FURTHER ACTION	THER See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).			
International application No.	International filing da (day/month/year)	g date Priority Date (day/month/year)			
PCT/AU 98/00502 30 June 1998 30 June 1997					
International Patent Classification (IPC) or national classification and IPC					
Int. Cl. <sup>6</sup> B60D 1/00, 1/58, 1/60, B62D 25/22					
Applicant DAVIS Stephen James					
This international preliminary     Authority and is transmitted t			is International Preliminary Examining		
2. This REPORT consists of a to	tal of four sheets, ir	ncluding this cover sh	eet.		
This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).					
These annexes consist of a tot	al of six sheet(s).		-		
3. This report contains indications relating to the following items:					
I X Basis of the report					
II Priority	II Priority				
III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability					
IV Lack of unity of invention					
V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					
VI X Certain documents cited					
VII Certain defects in	VII Certain defects in the international application				
VIII Certain observations on the international application					
Date of submission of the demand 07 January 1999		Date of completion of 02 July 1999	the report		
Name and mailing address of the IPEA AUSTRALIAN PATENT OFFICE PO BOX 200	/AU /	Authorized Officer			
WODEN ACT 2606 AUSTRALIA		ASANKA PERER	A		
Facsimile No. (02) 6285 3929 Telephone No. (02) 6283 2373					

I.	Basis of the report	
1.	With regard to the elements o	f the international application:*
	the international application	ation as originally filed.
	pag	ges 1 - 8, as originally filed, ges , filed with the demand, ges , filed with the letter of .
	pag	ges , as originally filed, ges , as amended (together with any statement) under Article 19, ges , filed with the demand, ges 9 - 14, filed with the letter of 11 June 1994.
	X the drawings, pa	ges 1/4-4/4., as originally filed,
	pag	ges , filed with the demand,
	pag	ges, filed with the letter of.
	the sequence listing par	t of the description:
	pag	
	pag	
	pag	es , filed with the letter of
2.	which the international applica	all the elements marked above were available or furnished to this Authority in the language in ation was filed, unless otherwise indicated under this item.  The or furnished to this Authority in the following language which is:
	the language of a transl	ation furnished for the purposes of international search (under Rule 23.1(b)).
	the language of publica	tion of the international application (under Rule 48.3(b)).
	the language of the tranand/or 55.3).	slation furnished for the purposes of international preliminary examination (under Rules 55.2
3.	With regard to any nucleotide sequence listing:	e and/or amino acid sequence disclosed in the international application, was on the basis of the
	contained in the interna	tional application in written form.
	filed together with the i	nternational application in computer readable form.
	furnished subsequently	to this Authority in written form.
	furnished subsequently	to this Authority in computer readable form.
		subsequently furnished written sequence listing does not go beyond the disclosure in the
		n as filed has been furnished.  Information recorded in computer readable form is identical to the written sequence listing has
4.	The amendments have	resulted in the cancellation of:
	the description,	pages
	the claims,	Nos.
	the drawings,	sheets/fig
5.		tablished as if (some of) the amendments had not been made, since they have been considered sure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**
*		een furnished to the receiving Office in response to an invitation under Article 14 are referred to in this
**		re not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).  The such amendments must be referred to under item 1 and annexed to this report

v.	Reasoned statement under Ar and explanations supporting s		ive step or industrial applicability; citations
1.	Statement		
	Novelty (N)	Claims 1 - 33 Claims	YES NO
	Inventive step (IS)	Claims 1 - 33 Claims	YES NO
	Industrial applicability (IA)	Claims 1 - 33 Claims	YES NO

2. Citations and explanations (Rule 70.7)

The closest prior art was found in the following documents:

- (a) GB 2248814 A
- (b) US 3858905 A
- (c) GB 2124982 A

None of the above documents teaches or fairly discloses a step apparatus as defined by the independent claims 1, 6, 14, or 29.

Therefore the subject matter of claims 1 -33 is new and meets the requirements of Article 33(2) PCT with regard to the requirement for novelty.

Similarly the claimed invention is not obvious in the light of any of these patent documents nor disclosed in any obvious combination, nor would the claimed invention be obvious to a person skilled in the art in the light of common general knowledge by itself or in combination with any of these patent documents.

Therefore the subject matter of claims 1 - 13 is not obvious and meets the requirements of Article 33(3) PCT with regard to the requirement for inventive step.

With regard to the document(s) listed in Box VI under "certain documents cited", these are documents published prior to the international filing date but later than the priority date claimed but which would otherwise be considered to be of particular relevance.

Under the PCT, novelty is considered only in respect of documents published before the priority date. The relevance of a document published after the priority date is dependent upon national law. Such documents are excluded from consideration in preliminary examination, but are noted for information.

VI.	Certain documents cite	d		
1.	Certain published docum	nents (Rule 70.10)		
	Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
P,X	US 5738362 A	14 April 1998	02 July 1996	02 July 1996
This	document discloses each an	d every one of the feature	s of claims 1, 3 and 4	; ;
2.	Non-written disclosures	(Rule 70.9)		
ŀ	Kind of non-written disclosure	Date of non-wr	itten disclosure	written disclosure referring to non- written disclosure (day/month/year)

410 Rec'd PCT/PTO 3 0 DEC 1999

CLAIMS

Step apparatus including:

a mounting portion adapted to engage a vehicle in the region of the towing

5 hitch assembly and be secured to the vehicle by the hitch assembly or a portion thereof in lieu of a portion of the hitch assembly; and

a step portion supported on said mounting portion.

2. Step apparatus according to Claim 1, wherein said mounting portion 10 comprises a body member having a threaded stud adapted to engage the hitch ball aperture in a conventional gooseneck.

Step apparatus according to Claim 1, wherein said mounting portion includes a body member adapted to engage the tubular socket of a Hayman Reece towing

4. Step apparatus according to Claim 1, wherein said step portion is mounted to the mounting portion in a manner permitting the step to be moved from an in-use position to a stowed position.

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15—hitch.

TOPINGEL WEST

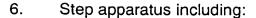
5. Step apparatus according to Claim 4, wherein said step portion is hinged to the mounting portion whereby the step portion may be moved from an in use position where the step is disposed above the vehicle hitch to a stowed position whereby the hitch may be undone.

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a body member having a recess adapted to pass over the hitch ball of a towing hitch;

a step portion supported on said body member;

support means whereby the body member bears in use on towing hitch apart from said hitch ball; and

interengagement means adapted to secure said body member on said hitch ball.

- 7. Step apparatus according to Claim 6, wherein said towing hitch comprises a gooseneck type and wherein said support means comprises a lower end of said body member adapted to bear on said gooseneck.
- 8. Step apparatus according to any one of Claims 6 and 7, wherein said
  15 interengagement means comprises a yoke member adapted to engage the hitch ball stem via a slot provided in said body member.
  - 9. Step apparatus according to any one of Claims 6 and 7, wherein said interengagement means comprises a pair of spaced extensions of said body member extending below said towing hitch and adapted to receive a locking pin passing below said towing hitch.
  - 10. Step apparatus according to any one of claims 6 to 9, wherein said interengagement means is selected whereby said body member may be installed and removed from said towing hitch without tools.

- 11. Step apparatus according to Claim 6, wherein said step portion renders the hitch assembly inoperable.
- 5 12. Step apparatus according to Claim 11, wherein in use the step portion prevents attachment or detachment of a hitched towable vehicle.
- 13. Step apparatus according to Claim 6, wherein said step portion is mounted in a manner permitting the step to be moved from an in-use position to a stowedposition.
  - 14. Step apparatus including:

a mounting portion adapted to be secured to a vehicle by bolting up between the towing hitch and a bolt-up type hitch mounting; and

a step portion supported on said mounting portion.

- 15. Step apparatus according to Claim 14, wherein said mounting portion transmits step loads in use to the designated load bearing portion of the hitch mounting.
- 20 16. Step apparatus according to Claim 14, wherein said mounting means is secured to the vehicle or hitch assembly whereby in use the step portion renders the hitch assembly inoperable.

- 17. Step apparatus according to Claim 16, wherein said step portion is selectively secured to said mounting portion, whereby in use the step portion prevents attachment or detachment of a hitched towable vehicle.
- 5 18. Step apparatus according to Claim 14, wherein said step portion is mounted to the mounting portion in a manner permitting the step to be moved from an in-use position to a stowed position.
- 19. Step apparatus according to Claim 15, wherein said step portion is hinged to the mounting portion whereby the step portion may be moved from an in use position where the step is disposed above the vehicle hitch to a stowed position whereby the hitch may be undone.
- 20. Step apparatus according to Claim 14, wherein said towing hitch15 is selected from a pintle hook hitch and a ball hitch.
  - 21. Step apparatus according to any one of Claims 14 to 20, wherein said step portion is located in use above the towing hitch.
- 20 22. Step apparatus according to Claim 21, wherein said step portion is formed integrally with said mounting portion, and wherein said step portion is in use sufficiently high above the towing hitch to permit use of the towing hitch.
- 23. Step apparatus according to Claim 21, wherein said step portion is removable25 from said mounting portion.



24. Step apparatus according to Claim 21, wherein said step portion and mounting portion form an assembly wherein said step portion may be moved from a deployed position over the towing hitch to a stowed position forward of the towing hitch.

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25. Step apparatus according to Claim 24, wherein said step portion is securable in one or more of its deployed or stowed position.

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26. Step apparatus according to Claim 25, wherein said step portion is securable over said towing hitch whereby the hitch cannot be engaged with a trailer or the like.

27. Step apparatus according to Claim 26, wherein said step portion is securable over said towing hitch, and wherein a trailer or the like hitched therebeneath cannot be decoupled.

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28. Step apparatus according to any one of Claims 23 to 27, wherein said step portion is hinged to said mounting portion in use.

Step apparatus including:

a mounting portion adapted to be secured to a vehicle by the gooseneck for a ball hitch and wherein said mounting portion is secured to the gooseneck by the hitching ball; and

a step portion supported on said mounting portion.





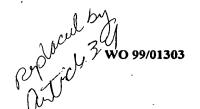
Step apparatus according to Claim 29, wherein said step portion is located in use above the towing hitch.

- 31. Step apparatus according to Claim 30, wherein said step portion is selectively
- secured to said mounting portion, whereby in use the step portion prevents attachment or detachment of a hitched towable vehicle.

32. Step apparatus according to Claim 30, wherein said step portion is mounted to the mounting portion in a manner permitting the step to be moved from an in-use position to a stowed position.

33. Step apparatus according to any one of the preceding claims, wherein said step portion has rounded corners to protect persons from impact injuries from said towing hitch.





### AMENDED CLAIMS

[received by the International Bureau on 23 September 1998 (23.09.98); new claims 11-29 added; original claims unchanged (5 pages)]

- 1. Step apparatus including:
  - a mounting portion adapted to engage a vehicle in the region of the towing
- 5 hitch; and
  - a step portion supported on said mounting portion.
  - 2. Step apparatus according to Claim 1, wherein said mounting portion is secured to the vehicle by the hitch assembly or a portion thereof.

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- 3. Step apparatus according to Claim 2, wherein said mounting means is secured to the vehicle in lieu of a portion of the hitch assembly.
- Step apparatus according to Claim 3, wherein said mounting portion
   comprises a body member having a threaded stud adapted to engage the hitch ball aperture in a conventional gooseneck.
  - 5. Step apparatus according to Claim 2, wherein said mounting means includes a body member adapted to engage the hitch ball of the towing hitch.

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6. Step apparatus according to Claim 3, wherein said mounting means includes a body member adapted to engage the tubular socket of a Hayman Reece towing hitch.

## AMENDED SHEET (ARTICLE 19)

- 7. Step apparatus according to Claim 2, wherein said mounting means is secured to the vehicle or hitch assembly whereby the step portion renders the hitch assembly inoperable.
- Step apparatus according to Claim 7, wherein said step portion is selectively secured to said mounting portion, whereby in use the step portion prevents attachment or detachment of a hitched towable vehicle.
- 9. Step apparatus according to Claim 2, wherein said step portion is mounted to
   10 the mounting portion in a manner permitting the step to be moved from an in-use position to a stowed position.
- Step apparatus according to Claim 9, wherein said step portion is hinged to the mounting portion whereby the step portion may be moved from an in use position
  where the step is disposed above the vehicle hitch to a stowed position whereby the hitch may be undone.
  - 11. Step apparatus including:

a body member having a recess adapted to pass over the hitch ball of a towing hitch;

a step portion supported on said body member;

support means whereby the body member bears in use on towing hitch apart from said hitch ball; and

interengagement means adapted to secure said body member on said hitch 25 ball.

12. Step apparatus according to Claim 11, wherein said towing hitch comprises a gooseneck type and wherein said support means comprises a lower end of said body member adapted to bear on said gooseneck.

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- 13. Step apparatus according to any one of Claims 11 and 12, wherein said interengagement means comprises a yoke member adapted to engage the hitch ball stem via a slot provided in said body member.
- 10 14. Step apparatus according to any one of Claims 11 and 12, wherein said interengagement means comprises a pair of spaced extensions of said body member extending below said towing hitch and adapted to receive a locking pin passing below said towing hitch.
- 15. Step apparatus according to any one of claims 11 to 14, wherein said interengagement means is selected whereby said body member may be installed and removed from said towing hitch without tools.
  - 16. Step apparatus including:
- a mounting portion adapted to be secured to a vehicle by the hitch mounting of a towing hitch thereof; and
  - a step portion supported on said mounting portion.

- 17. Step apparatus according to Claim 16, wherein said mounting portion transmits step loads in use to the designated load bearing portion of the hitch mounting.
- 18. Step apparatus according to Claim 17, wherein said hitch mounting is a bolted up hitch mounting and wherein said mounting portion is bolted up between the towing hitch and the hitch mounting.
- 19. Step apparatus according to Claim 18, wherein said towing hitch10 is selected from a pintle hook hitch and a ball hitch.
  - 20. Step apparatus according to Claim 17, wherein said hitch mounting is a gooseneck for a ball hitch and wherein said mounting portion is secured to the gooseneck by the hitching ball.

- 21. Step apparatus according to any one of Claims 16 to 20, wherein said step portion is located in use above the towing hitch.
- Step apparatus according to Claim 21, wherein said step portion is formed
   integrally with said mounting portion, and wherein said step portion is in use
   sufficiently high above the towing hitch to permit use of the towing hitch.
  - 23. Step apparatus according to Claim 21, wherein said step portion is removable from said mounting portion.

- 24. Step apparatus according to Claim 21, wherein said step portion and mounting portion form an assembly wherein said step portion may be moved from a deployed position over the towing hitch to a stowed position forward of the towing hitch.
- 5 25. Step apparatus according to Claim 24, wherein said step portion is securable in one or more of its deployed or stowed position.
  - 26. Step apparatus according to Claim 25, wherein said step portion is securable over said towing hitch whereby the hitch cannot be engaged with a trailer or the like.
  - 27. Step apparatus according to Claim 26, wherein said step portion is securable over said towing hitch, and wherein a trailer or the like hitched therebeneath cannot be decoupled.
- 15 28. Step apparatus according to any one of Claims 23 to 27, wherein said step portion is hinged to said mounting portion in use.
- Step apparatus according to any one of the preceding claims, wherein said step portion has rounded corners to protect persons from impact injuries from said towing hitch.

## FOR THE PURPOSES OF INFORMATION ONLY

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# INTERNATIONAL SEARCH REPORT

International Application No. PCT/AU 98/00502

<b>A.</b>	CLASSIFICATION OF SUBJECT MATTER		90.0002
Int Cl <sup>6</sup> :	B60D 1/00, 1/58, 1/60, B62D 25/22		
According to	International Patent Classification (IPC) or to bot	h national classification and IPC	,
	FIELDS SEARCHED		
Minimum docu IPC: B60D 1	umentation searched (classification system followed by 61/00, 1/58, 1/60, B62D 25/22, B60R 3/-	classification symbols)	
Documentation AU: IPC as a	searched other than minimum documentation to the exabove	stent that such documents are included in t	he fields searched
Electronic data WPAT: with	base consulted during the international search (name o keywords	of data base and, where practicable, search	terms used)
C.	DOCUMENTS CONSIDERED TO BE RELEVAN	Τ .	
Category*	Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.
х	GB 2248814 A (MITCHELL) 22 April 1992 See the whole document		1, 2, 5-8
х	US 3858905 A (PEEBLES) 7 January 1975 column 2 line 7 - column 3, line-18, Figures		1-3, 5-8
x	GB 2124982 A (H. ROBERTS & BROOKS (SY 29 February 1984	,	
	page 1, line 53 - page 2, line 15, claims, Figures	5	1, 2, 7-10
x	FR 2668425 A1 (BRUNIER) 30 April 1992 See the whole document		1, 2, 9-10
X Further documents are listed in the continuation of Box C See patent family annex			
* Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier document but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) document referring to an oral disclosure, use, exhibition or other means  "P" document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family			the application but cited to derlying the invention cannot claimed invention cannot usidered to involve an taken alone claimed invention cannot estep when the document is ch documents, such on skilled in the art
Date of the actual completion of the international search  14 July 1998  Date of mailing of the international search report  2 2 JUL 1998			
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200 WODEN ACT 2606 AUSTRALIA Facsimile No.: (02) 6285 3929  Authorized officer  Authorized officer  ASANKA PERERA  Telephone No.: (02) 6283 2373			

# INTERNATIONAL SEARCH REPORT

International Application No.

C (Continua	tion) DOCUMENTS CONSIDERED TO BE RELEVANT	)2
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
х	GB 2242659 A (MITCHELL) 9 October 1991 See the whole document	1-3
$\mathbf{X}^{c}$	US 4194754 A (HIGHTOWER) 25 March 1980 column 2 line 21 - column 3 line 27, Figures	ı.
x	US 3394947 A (STUBE) 30 July 1968 column 1, line 66 - column 2, line 54, Figures	1
P, X	US 5738362 A (LUDWICK) 14 April 1998 See the whole document	1-4, 7-9



### From the INTERNATIONAL BUREAU

## **PCT**

## **NOTIFICATION OF ELECTION**

(PCT Rule 61.2)

United States Patent and Trademark Office (Box PCT) Crystal Plaza 2 Washington, DC 20231 ÉTATS-UNIS D'AMÉRIQUE

Date of mailing (day/month/year)

03 February 1999 (03.02.99)

in its capacity as elected Office

International application No.

PCT/AU98/00502

Applicant's or agent's file reference
DAV02529.01I/CTG

Priority data (day/month/year)

International filing date (day/month/year) 30 June 1998 (30.06.98) Priority date (day/month/year) 30 June 1997 (30.06.97)

**Applicant** 

DAVIS, Stephen, James

The designated Office is hereby notified of its election made:
X in the demand filed with the International Preliminary Examining Authority on:
07 January 1999 (07.01.99)
in a notice effecting later election filed with the International Bureau on:
The election X was
was not
made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).
<i>,</i>
•

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Authorized officer

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